

REMARKS

4/17/03

Amendments

The Applicants have amended Claims 1-3, 5-13, 15, 18, and 21-25. Claim 4 has been cancelled. Accordingly, Claims 1-3, and 5-25 are pending in the application. These changes are respectfully submitted to not introduce new matter. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 1-25 have been rejected under 35 U.S.C. §103(a) as being unpatentable by Maria Papadopouli et al (Marie Papadopouli and Henning Schulzrinne. "Network Connection Sharing in an ad Hoc Wireless Network among Collaborative Hosts", NOSSDAV, June 24th-26th, 1999, Bell Labs, New Jersey) (hereinafter Popadopouli) in view of the United States Patent Number 5,744,668 issued to Choquier et al. (hereinafter Choquier). The Applicant respectfully traverses the rejection.

The present invention discloses a method and system for providing access to a network. An end device may seek access to a network through one or more access network-terminating devices that are already connected to the target network. In the Applicant's invention, the end device determines the access capability and current load condition of each of the terminating devices with relation to the network. The end device then selects an appropriate access network-terminating device based on the obtained information and the end device's preferences. End device preferences are stored as a preferred access capability and the preferences include various predetermined factors. Information regarding network access is retained within memory in each access network-terminating device as access capability information. Upon attempting a connection with the network, the end device queries the available access network-terminating devices and compares the end device's preferred access capability against the network terminating devices' access capability. Based on the comparison, a best

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access network-terminating device is selected for connecting the end device to the network.

In contrast to the Applicant's invention, the Papadopouli reference describes an architecture that "...enables network connection sharing..." The Papadopouli reference describes a solution to bandwidth problems that comprises collaboration among users to share a limited number of network connections. The distinction of the Papadopouli system with regard to the Applicant's invention is that in Papadopouli, a user (end device) uses a collaborating host (another end device) to connect to the Internet (network) and operates through that host for the duration of the connection. The present invention provides selective access to a network via access network-terminating devices that provide a best possible access for each situation. The method and system disclosed by the Applicant is based on matching preferred end device capability with a "best" access capability of an access network-terminating device (Pages 4-6). The end device considers several factors, including bandwidth, when determining whether to use a particular terminating device to connect to a network.

The United States Patent Number 5,774,668 granted to Choquier et al. (Choquier) utilizes gateway computers that are interconnected by a Local Area Network to connect a client (end device) to a server that is running a distributed application. The Applicants note that Choquier was cited for teaching polling of an indirect interface, in this instance the gateway computer. In Choquier, the gateway computer directs the client to a particular server according to that server's load. The gateway computer contains a service map that is periodically updated and stores information about current load situations in the application servers. The service map is consulted for directing the client to an appropriate application server. Simply put, the Applicant's invention matches the preferences of an end user with a network connection device, while Choquier is tries to connect an end user to a lightly loaded server on the network.

The present invention differs from Choquier in that the end device selects an access network-terminating device by which to connect to a network as opposed to the

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gateway computer selecting a server on the network to connect to the end device. In the present invention the access network-terminating devices that are connected to the network may each have different characteristics, they may have differing prices for connection and they potentially may connect to different networks. In effect, the network-terminating device of the Applicant's invention serves as a translator for the end device, not as a traffic director as in Choquier.

The prior art references, Papadopouli and Choquier, either alone or in combination, do not disclose or suggest an end user device contacting and choosing an access network-terminating device according to access capability. In contrast to the teaching of the present invention, i.e., connecting an end device to a network by matching access capabilities, Papadopouli teaches collaborating with other end devices to connect to a network and Choquier teaches directing an end device to an application server on a network based on the server load. Therefore, the rejections of Claims 1-25 under 35 U.S.C. 103(a) stands traversed.

According to the remarks above, Applicant respectfully submits that independent Claims 1, 7, 15 and 21 as amended are patentable over the art of record. In addition, the respective dependent Claims 2-3, 5-6, 8-14, 16-20 and 22-25 over the art of record for at least the reasons recited above with respect to Claims 1, 7, 15, and 21.

CONCLUSION

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for Claims 1-3 and 5-25.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

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Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

Respectfully submitted,



By Sidney L. Weatherford
Registration No. 45,602
Ericsson Patent Counsel

6/17/03

VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE CLAIMS:**

Please amend claims 1, 5, 7-13, 16, 18, 21, and 30 as follows:

1. (Amended) A method of selectively accessing a network, [using an end device having an indirect interface that can communicate with one or more access network terminating devices, the method] comprising the steps of:

determining whether an end device has access to said network, wherein said end device is coupled to an indirect interface capable of communicating with one or more access network terminating devices;

confirming the availability of [an access capability for each of the] said one or more access network terminating devices, [and]

determining the access capability of each of said one or more access network terminating devices, said access capability comprising one or more predetermined factors;

comparing the determined access capability for [the] each of [the] said one or more access network terminating devices with a preferred access capability being associated with said [the] end device[.]; and

selecting at least one of said one or more access network terminating devices to provide an optimum connection to said network, wherein the access capability of said selected network terminating device is ranked highest according to said predetermined factors.

[wherein at least one of the access network terminating devices is selected based on the comparison.]

2 (Amended) The method of claim 1, further comprising the step of[:] configuring said [the] end device according to the access capability of the selected at least one of [the] said one or more access network terminating devices.

3. (Amended) The method of claim 1, wherein said predetermined factors [the access capability] of said one or more access network terminating devices comprise

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[further includes one or more of:] cost of access, coverage area, bandwidth delay, priority level and Quality of Service (QoS) [QoS].

Please cancel Claim 4.

5. (Amended) The method of claim 1, further comprising the steps of:
polling said [the] indirect interface to detect if one or more new access network terminating devices are available to said [the] end device;

determining an access capability for each of the one or more new access network terminating devices if detected; and

comparing [the determined] said access capability for [the] each of the one or more detected new access network terminating devices with said preferred access capability of said end device to determine whether said detected new access network terminating devices can improve the current connection of said end device to said network [at least one of said preferred access capability associated with the end device and said access capability of a currently used access network terminating device wherein one of said new access network terminating devices can be selected based on the comparison.]

6. (Amended) The method of claim 5, further comprising the steps of:
selecting one of the one or more new access network terminating devices base on the comparison; and

configuring said [the] end device according to the access capability of the selected one of the one or more new access network terminating devices.

7. (Amended) A system for providing selective access to a network comprising:
an end device;
at least one access network terminating device for connecting said end device to said network; [and]

an indirect interface coupled to said [the] end device for connecting said end device [and] to said at least one access network terminating device; and

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a processor for:

detecting said at least one access network terminating device;

collecting an access capability of said at least one access network terminating device, said access capability comprising one or more predetermined factors;

comparing said predetermined factors of said access capability of said at least one access network terminating device to preferred predetermined factors associated with said end device; and

selecting at least one preferred access network terminating device according to said comparison.[, the said indirect interface configured to:

determine an access capability for each of the at least one access network terminating device; and compare the determined access capability for the each of the at least one access network terminating device with a preferred access capability associated with the end device, wherein one of said at least one access network terminating devices is selected based on the comparison.]

8. (Amended) The system of claim 7, further comprising[:] means for configuring said [the] end device to match [according the] said access capability of said preferred [the selected one of the at least one] access network terminating device.

9. (Amended) The system of claim 7, wherein said predetermined factors include [the access capability further includes one or more of:] cost of access, coverage area, and Quality of service (QoS). [QoS.]

10. (Amended) The system of claim 7, wherein said preferred predetermined factors include [the preferred access capability further includes] one or more of: cost of access, coverage area, and QoS.

11. (Amended) The system of claim 8, further comprising[:] means for polling to detect if one or more new access network terminating devices are available to said end device;

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means for determining an access capability for each of the one or more new access network terminating devices if detected; and

means for comparing [the determined] said access capability for [the] each of the one or more detected new access network terminating devices with said preferred access capability of said end device to determine whether said detected new access network terminating devices can improve the current connection to said network.[at least one of said preferred access capability associated with the end device and an access capability of a currently employed access network terminating device, wherein one of said new access network terminating devices can be selected based on the comparison.]

12. (Amended) The system of claim 11, further comprising[:] means for configuring the end device according to the access capability of the selected one of the one or more new access network terminating devices.

13. (Amended) The system of claim 12 [8], wherein said end device is a cellular telephone.

14. The system of claim 13, wherein said cellular telephone includes, as a direct interface, means for communicating over a cellular air interface and includes, as said indirect interface, means for communicating over a Bluetooth air interface.

15. (Amended) An end device comprising:

means for storing access capability for said end device; [access network preferences;]

means for communicating with [a plurality of network access] at least one access network terminating device over an indirect interface; [terminating devices over a indirect interface;]

means for comparing said stored access capability to an access capability of each of said at least one access network terminating devices; and

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selecting a preferred access network terminating device according to said comparison to provide an optimum connection to said network, wherein said access capability comprises predetermined factors and said preferred network terminating device is determined according to said predetermined factors. [means for selecting one of said plurality of network access terminating devices by receiving access network capabilities associated with each of said plurality of network access terminating devices over said indirect interface and comparing said received network capabilities with said stored access network preferences.]

18. (Amended) The end device of claim 15, further comprising[:] means for [of] communicating over a direct interface.

21. (Amended) A method for selectively connecting an end device to a network comprising the steps of:

identifying at least one access network terminating device [available to] for connecting said end device [for connection] to said network;

transferring access capability information between said at least one access network terminating device and said end device;

comparing said transferred access capability information with stored user preferred end device access capability information;

selecting one of said at least one access network terminating devices based on a result of said comparing step; and

connecting to said network using said selected access network terminating device.

22 (Amended) The method of claim 21, further comprising the step of[:] continuing, after said connecting step, to identify access network terminating devices available to said end device.

23. (Amended) The method of claim 22, further comprising the step of: determining if said access capability information associated with a newly identified access network

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terminating device provides a better [greater] match with said stored user preferred access capability information than said selected network terminating device.

24. (Amended) The method of claim 23 further comprising the step of[:] selectively changing said connection to said network from said selected access network terminating device to said newly identified access network terminating device based on a result of said determining step.

25. (Amended) The method of claim 21, wherein said step of transferring further comprises the step of[:] offering, from said at least one access network terminating device, a foreign agent to said end device.

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